

## Red Laser Diode

SM-TO

650nm 7mW

### Features

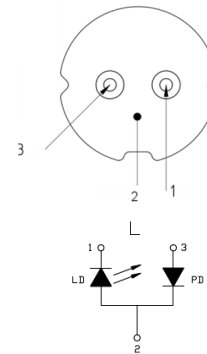
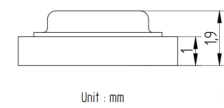
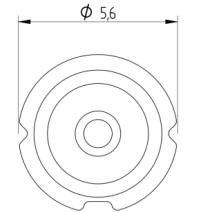
Output Power: 7mW  
TE mode  
Single Transverse Mode  
Stable reliability  
High temperature operation

### Applications

Industry: laser level, illumination, meter, scanner, detector  
Consumer: point light, sweeper, game lighting  
Health: special wavelength light source.

### Absolute maximum ratings

Parameter	Symbol	Condition	Rating	Unit
Light output power	$P_O$	CW	10	mW
Reverse voltage (LD)	$V_{RL}$	-	2	V
Case temperature	$T_C$	-	-10~+85	°C
Storage temperature	$T_S$	-	-40~+85	°C



### Electrical and optical characteristics ( $T_c=25^\circ\text{C}$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength	$\lambda$	-	655	-	nm	$P_o=7\text{mW}$
Threshold current	$I_{th}$	-	17	-	mA	
Operating current	$I_{op}$	-	25	-	mA	
Operating voltage	$V_{op}$	-	2.1	-	V	
Differential efficiency	$\eta$	-	0.87	-	mW/mA	$P_o=5-7\text{mW}$
Monitor current	$I_m$	-	0.1	-	mA	$P_o=7\text{mW}, V_{RD}=5\text{V}$

\* Sufficient heat dissipation is required for CW operation.

### Precautions

- Do not operate the device above maximum ratings. Doing so may cause unexpected and permanent damage to the device.
- Take precautions to avoid electrostatic discharge and/or momentary power spikes. A change in the characteristics of the laser or premature failure may result.
- Proper heat sinking of the device assures stability and lifetime. Always ensure that maximum operating temperatures are not exceeded.
- Observing visible or invisible laser beams with the human eye directly, or indirectly, can cause permanent damage. Use a camera to observe the laser.
- No laser device should be used in any application or situation where life or property is at risk in event of device failure.
- Specifications are subject to change without notice. Ensure that you have the latest specification by contacting us prior to purchase or use of the product.

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